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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,416	11/16/2001	Martin Thomas Miller	455610-2420	8540
20999	7590	03/26/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			WEST, JEFFREY R	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,416

Applicant(s)

MILLER ET AL.

Examiner

Jeffrey R. West

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because of the following informalities:

Page 24, lines 15-19, describe Figure 11C as containing reference numbers "110", "120", "130", "1140", and "1150", while Figure 11C does not contain these numbers. Further, it is noted that Figure 1 does contain some of these numbers, however, in Figure 1, they refer to different elements.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "1110" (page 25, line 20).

3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

On page 6, lines 7-8, the "preprocessing system" is incorrectly labeled "2121" instead of "2125" as it is labeled in Figure 21.

Page 8, lines 13-15, contains the sentence fragment "While other LeCroy oscilloscopes have allowed for certain chaining and different processing speeds within a system."

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On page 11, line 10, "at least one output pin" should be ---at least 1 output pin---.

On page 12, lines 5-6, both the "inputs" and the "outputs" are labeled "216".

On page 16, line 10, "Synchronize Web)" should be ---Synchronize Web---

Page 24, lines 3-5, appear to describe Figure 10A and a corresponding reference to the Figure should be mentioned in these lines.

On page 25, line 20, "output form" should be ---output from---.

On page 27, lines 9-10, it is unclear to what "phase 16" refers.

Appropriate correction is required.

Claim Objections

5. Claims 1, 3, 7, 14, 15, 16, 22, 35, and 37 are objected to because of the following informalities:

In claim 1, line 4, "said received parameters" should be ---said one or more input parameters---.

In claim 1, line 5, "said plurality processing elements" should be ---said plurality of processing elements---.

In claim 3, line 2, "said processing elements" should be ---said plurality of processing elements---.

In claim 7, line 4, "said received instructions" should be ---said one or more instructions---.

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In claim 14, line 4, "said processing elements" should be ---said plurality of processing elements---.

In claim 15, line 1, "controlling of said" should be ---controlling said---.

In claim 16, lines 1 and 2, "said processing elements" should be ---said plurality of processing elements---.

In claim 22, line 2, "plurality of processing elements" should be ---a plurality of processing elements---.

In claim 22, line 3, "said processing elements" should be ---said plurality of processing elements---.

In claim 35, line 3, "said processing elements" should be ---said plurality of processing elements---.

In claim 37, lines 1 and 2, "said processing elements that is to be updated" should be ---said plurality of processing elements is to be updated---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4, 6, 16, 17, 25, 27, 37, and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 6, 16, 25, 27, and 37 are considered to be vague and indefinite because they include limitations describing speeds as "higher" and "lower"

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without clearly indicating to one having ordinary skill in the art to what these relative terms refer. For example, claim 4 recites, "wherein one of said at least two of said plurality of processing elements operates at a higher acquisition speed". There is, however, no previous mention of any acquisition speed, and therefore it is unclear to what this acquisition speed is higher than (i.e. higher than what?). It is suggested that Applicant re-word these claims using language similar to ---wherein one of said at least two of said plurality of processing elements operates at an acquisition speed and another of said at least two of said plurality of processing elements operates at a display speed, wherein the acquisition speed is higher than the display speed--- in order to insure clarity.

Claims 17 and 38 are rejected under 35 U.S.C. 112, second paragraph, because they incorporate the lack of clarity present in their respective parent claims.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-6, 14-16, 18-27, 35-37, 39-42 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,809,189 to Batson.

Batson discloses a method for configuring and performing processing in a digital oscilloscope (abstract) comprising the steps of receiving one or more input parameters/instructions (column 4, lines 14-18 and column 18, lines 53-58), defining a plurality of connected discrete processing elements based upon the received input parameters/instructions, and connecting the plurality of processing elements to define a processing web controlling the flow of information (column 5, lines 40-45 and column 18, line 61 to column 19, line 20).

Batson also discloses updating at least two of the processing elements from an idle state using a processing control object (column 19, lines 53-54), wherein the updating of the processing elements are at different speeds with one of the processing elements operating a higher acquisition speed and another operating at a lower display speed (column 20, lines 13-30)

Batson also discloses that the element operating at a higher acquisition/processing operation speed is cumulative (analyzes a cumulative collection of data) (column 22, lines 57-68), while the element operating at a lower display speed is not cumulative (i.e. receives the data in sequence) (column 26, lines 11-15).

Batson discloses that when updating the processing elements, one of the processing elements requests desired data from an upstream source when data is requested from it by a downstream processing element (i.e. the display controller requests data from waveform memory "16" through memory management unit "14") (column 5, lines 9-29 and Figure 1), wherein the

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processing element is a rendering processing object (i.e. display controller), and there are no buffers present between the plurality of processing elements (Figure 1).

Batson also discloses updating one or more of the processing elements when one of the processing elements is redefined (column 19, lines 16-60) and when new data is available (column 19, lines 10-12).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7-9, 11, 12, 17, 28-30, 32, 33, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batson in view of U.S. Patent No. 5,668,469 to Natori et al.

As noted above, the invention of Batson teaches many of the features of the claimed invention, and while the invention of Batson does disclose synchronizing communication between the microprocessor and the memory control unit (column 7, lines 63-68), Batson does not specifically disclose synchronizing the display controlling processor devices.

Natori teaches a digital oscilloscope using a color plane display device and data display method comprising a plurality of processing elements,

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including acquisition devices and display devices, (Figure 1), wherein the data read out of a display memory using a display controller is in synchronization with the other processing elements (abstract and column 4, line 42 to column 5, line 14).

It would have been obvious to one having ordinary skill in the art to modify the invention of Batson to synchronizing the display controlling processor devices, as taught by Natori, because it is common in the art to synchronize components to insure that data output by a first device is received by a second downstream device at the same rate to insure accurate operation and Natori suggests that the combination would have provided correct timing for desired processing and increased resolution (column 4, lines 42-58).

12. Claims 10, 13, 31, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batson in view of Natori and further in view of U.S. Patent No. 5,736,971 to Shirai.

As noted above, the invention of Batson and Natori teaches many of the features of the claimed invention, and while the invention of Batson does disclose updating a processing elements based upon a request, Batson does not specify that the processing element requests the update upon activation of an update pin, wherein the processing element receives at least one input on an input pin and produces at least zero outputs on an output pin.

Shirai teaches a method and apparatus for increasing resolution of a computer graphics display including a display controller for connection to a

CRT (column 5, lines 12-15) that receives data inputs through at least one input pin (i.e. pin connector CN1) (column 5, lines 34-45), produces outputs through at least one output pin (i.e. pin connectors CN2-CN4) (column 5, lines 4-6), and receives controlling instructions through a processor at a pin (i.e. pin connector CN1) (column 4, lines 43-49).

It would have been obvious to one having ordinary skill in the art to modify the invention of Batson and Natori to include specifying that the processing element requests the update upon activation of an update pin, wherein the processing element receives at least one input on an input pin and produces at least zero outputs on an output pin, as taught by Shirai, because the invention of Batson and Natori does teaches the application of the processing device that receives data, outputs data, and receives controller signals from a processor for update indications, but does not give the specifics as to how the data is received (i.e. through pins), and Shirai suggests a corresponding structure applicable to carry out the invention of Batson and Natori that further allows synchronizing adjustments (column 2, lines 45-50).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 5,081,592 to Jenq teaches a test system for acquiring, calculating, and displaying representations of data sequences including a plurality of user defined functions.

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U.S. Patent No. 6,195,617 to Miller teaches a digital storage oscilloscope with simultaneous primary measurement and derived parameter display on common time axis including a synchronizing operation between processing devices.

U.S. Patent No. 6,371,672 to Pirie et al. teaches an imager featuring a service station assembly with interface board and cartridge assembly including a rasterizer receiving inputs and producing outputs at pins.

U.S. Patent No. 4,104,725 to Rose et al. teaches a programmed calculating input signal module for a waveform measuring and analyzing instrument.

U.S. Patent No. 4,884,228 to Stanley et al. teaches a flexible instrument control system.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrw
March 21, 2004


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